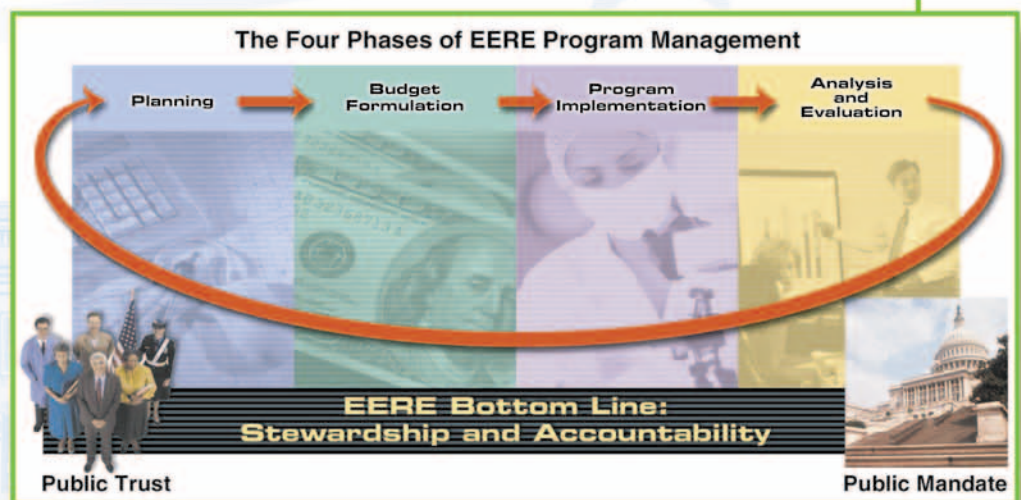


EERE PROGRAM MANAGEMENT "QUICK REFERENCE" GUIDE

December 2003

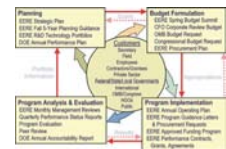


U.S. Department of Energy
Energy Efficiency and Renewable Energy



U.S. Department of Energy
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EERE Program Management “Quick Reference” Guide



This document is a companion to the EERE Program Management Reference Guide. It provides an overall description of the EERE Program Management structure, defines EERE program and project management roles and responsibilities, lays out the general sequence of activities in the program management cycle and introduces the EERE Strategic Management System (SMS) and the EERE Corporate Planning System and Data Center.

Quick references to the Guide and other sources of related program management information are provided throughout in information boxes associated with the text.

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I. Introduction – The Essence of Program Management

Running a program is a lot like operating a business.

An EERE program is in many ways just like a business. This business contributes to the overall success of the EERE and DOE missions in support of the National Energy Policy. EERE is, therefore, very similar to a division of a large corporation. The business is ongoing; it has no clearly definable point of completion or finish. EERE’s activities most likely involve pursuing continuous improvements in one or more specific technology and/or market areas.

Programs have customers and others who have a stake in the outcome.

A business needs to be developed, sustained and run effectively and efficiently. The purpose of any business is to meet stakeholders’ needs. In EERE’s case, the primary stakeholder is the American public, which needs clean and affordable energy. Other stakeholders include the various legitimate agents for the public, such as Congress, special interest groups, industries that manufacture and use energy-efficient products, environmental groups, and academic and scientific institutions.

EERE program management teams have responsibility for the bottom line.

Your position in EERE may be that of program manager, team leader, member of a program management team or provider of functional support. In any of these roles, you will guide or help guide program strategies and contribute to results.

The program has an ongoing mission, an overriding purpose and perhaps a vision of where to be in the future. Strategies and plans with long-term goals and objectives are needed as well.

Just like any business, it is important to have an explicit mission (a definitive statement of what you are in business for) and a vision (an image of an ideal future state, say ten or more years into the future). To achieve the vision, short- and long-term goals and objectives must be set and pursued. Your goals and objectives need to address satisfying the needs of customers and other stakeholders (the ends) and developing or increasing operational capacity (the means). Resources are also needed to operate the business. This means that products or services need to be offered and sold to obtain the financial wherewithal to acquire the necessary resources.

Programs need to compete for resources and also cooperate.

In EERE’s environment, a business division is called a program; it is a discrete element of the EERE mission. Resources are acquired through the budget process, a specialized mechanism for marketing and promoting the program. In the budget process, the program competes with many others for scarce resources, just like companies compete in the marketplace for the consumers’ dollar.

Selling the program is essential.

The program management team needs to plan what work needs to be done and how to do it.

It is therefore imperative that the program have a viable program strategy with well-defined plans geared toward yielding valuable benefits to the stakeholders. That is, the stakeholders must receive a return for the funds they are investing with the program or spending on its products and services. The program must show results.

The program management team needs to keep the program on track; know the status of the program.

In sum, programs need planning, budget formulation, program implementation, and analysis and evaluation.

Obtaining funds is necessary but not sufficient to ensure that a business succeeds. Funding must be allocating across various funding mechanisms, which involves obtaining the most beneficial mix of activities and goods and services. These funding mechanisms include contracts, grants, field work authorizations, financial incentives, and partnerships. In addition, there are a number of high leverage business-like arrangements that should also be considered. Among these are public policies, market interventions, consensus standards, public service promotions and cooperative ventures with business, academia or other Government entities. Partnerships with commercial manufacturers that produce advanced, energy-efficient technologies and with companies that use the technologies such as electric power companies are important for achieving improvements in energy efficiency. The details of these mechanisms will be provided later in this Guide.

Finally, activities need to be tracked to make sure the plans are being carried out. Periodically, as changes occur, goals and objectives should be reviewed to ensure they are correct and still on course.

Programs also have a lot of businesslike functions and activities to do.

The buck stops with the program manager and his/her team.

We have just described the four phases of program management: Planning, Budget Formulation, Program Implementation, and Analysis and Evaluation. To manage a program successfully, it must planned, budgeted for the plans, implemented (including timely execution of the budget), and overseen to ensure it stays on track. In doing so, the programmatic functions that plan, conduct and evaluate the actual work must be integrated with business activities that are necessary to get the work assigned, conducted and paid for.

EERE program management teams have been entrusted with a serious responsibility to always act in the best interest of the American public. They are stewards of substantial public funds. In addition to the guidance and instructions contained herein, the bottom line is that they are accountable for the success of the team program in all aspects.

II. EERE Programs as Key Mission Elements

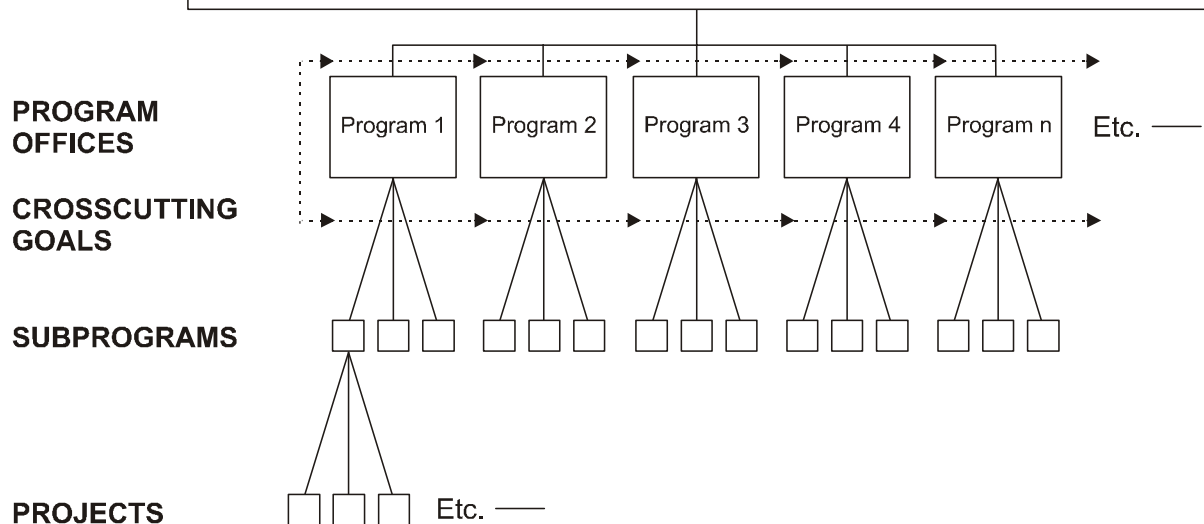
EERE accomplishes its mission through individual programs and collective efforts across programs.

To accomplish its mission, EERE, like any organization, must divide its work into manageable "segments." All of the work done in EERE can be represented by a work breakdown structure; a pyramid where the top level is the EERE mission and the succeeding lower levels are the EERE Programs and Projects respectively. Most EERE Programs are further subdivided by the program manager into sub programs. EERE must ensure that all of the work needed to accomplish its mission has been assigned to, and is being pursued by, individual programs, or is being addressed collectively across programs as "crosscut" goals and objectives. If all programs are successful in meeting their goals and objectives (including their expected contribution to crosscut goals) then, by definition, EERE should be successful in accomplishing its mission.

Below the program level is the project level. Projects may include discrete research and development activities, technology demonstrations or deployment initiatives. The distinctions between programs and projects are described in detail in Section III.

EERE MISSION:

To strengthen America's energy security, environmental quality, and economic vitality through public-private partnerships that enhance energy efficiency and productivity, bring clean, reliable, and affordable energy technologies to the marketplace, and make a difference in the everyday lives of Americans by enhancing their energy choices and their quality of life.



Program portfolios enhance EERE’s chances for success.

Currently, EERE has 11 programs. Each program has a performance risk, which means there is some likelihood that the program may not be able to carry out its plan completely and fall short of its goals. However, it is still possible that other programs may exceed their goals, resulting in EERE still accomplishing its mission. Hence the term “pooling the (performance) risk” at the next higher level. This is comparable to a stock portfolio or mutual fund where the performance of some stocks falls short, but others yield more than expected, so the overall fund or portfolio achieves the desired return.

The program management team must consider both program and EERE’s mission.

EERE management officials must keep this pooling of risk concept in mind when establishing programs and providing them guidance and resources.

EERE’s program portfolio is dynamic, requiring periodic review and adjustment.

The program management team must understand that their program has to fit into the larger portfolio. The program may not be as broadly chartered or generously funded because the program is sharing scarce resources with other programs in the interest of achieving a proper balance. They should always keep the end in sight (that is, the EERE mission), when implementing their programs. This requires attention to crosscutting goals, sometimes at the expense of higher risk to program goals.

EERE’s program structure needs to be carefully reviewed and adjusted over time in response to internal performance and external scientific/technological, political and economic factors. This causes turbulence that program managers must continually address.

EERE management has a continuing responsibility to provide adequate resources for programs. For example, a reduction in a program’s funding generally requires a commensurate adjustment to its goals so that it remains viable.

III. Distinctions Between EERE Programs and Projects

EERE Programs typically involve a range of activities including Technology Research and Development, Demonstration, and Deployment. These activities are generally carried out as a set or series of discrete projects. EERE's policy is to assign and manage (plan, fund, implement and track) programs and projects differently. Programs typically are managed in Headquarters and projects in the field (see Program and Project Management Responsibilities in Section V).

The EERE Program Management Focus Group developed the following definitions:

Programs and Projects are defined (and managed) separately.

- **Program:** An organized set of ongoing activities directed toward a common purpose, or goal undertaken in support of an assigned mission area.

A program is generally the highest level of work breakdown structure within a specific mission area. It is characterized by a strategy for accomplishing a set of definitive goals and objective(s) aligned to and in support of the mission goals. Programs are typically subdivided into projects which are managed closely by using project management tools and techniques. Programs in EERE are characterized as either core programs and subprograms or programs in the exploration or initiation stage or that crosscut and contribute to other programs. Common functions, such as planning, research, and international cooperation, typically are not programs. Viewed as an integrated whole, a program is the aggregate of its subprograms (which have the same characteristics of programs but represent one additional level of subdivision) and its projects.

Programs are ongoing and typically managed by Headquarters Program Offices reporting to the DAS for Technology Development.

Projects have a defined beginning and end and are typically managed in the Field.

- **Project:** An executable element of a program, normally with its own discrete beginning, end and specified outcome(s).

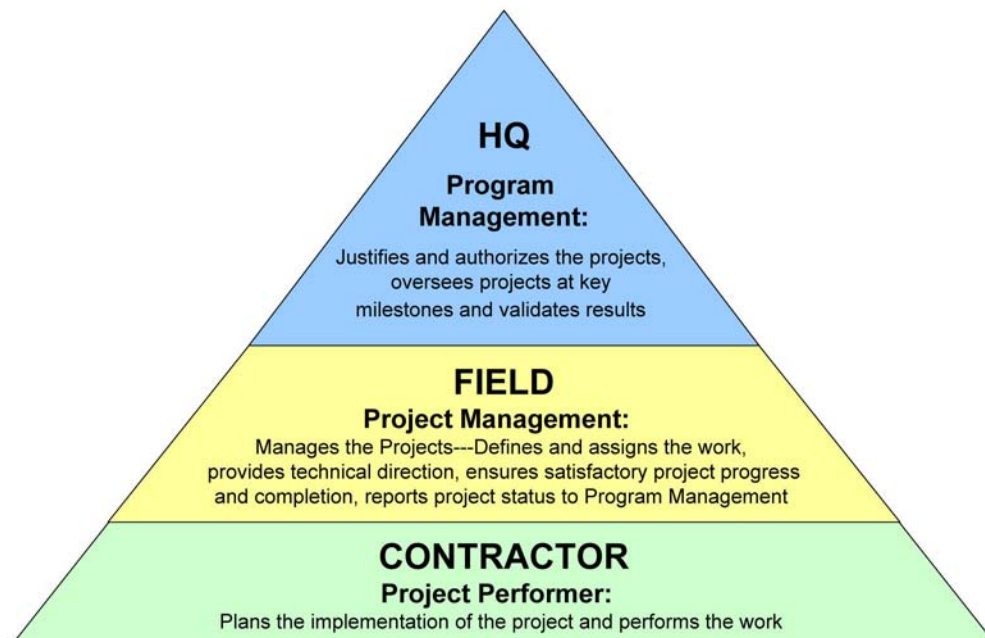
A project could be an effort to establish additional capability to support one or more programs (e.g., a construction project), or it could be an executable increment or stepping stone of program activity (e.g., FY2001 heavy vehicle fuel system research and technology advancement) aimed at achieving specific objectives in the specified period. A project, usually consisting of one or more tasks, is individually planned and approved and is closely managed and controlled.

IV. Roles and Responsibilities of Headquarters and Field Activities

EERE HQ manages the programs, identifies and assigns the work; field elements manage and/or do the work.

The basic division of responsibility and accountability in EERE is that Headquarters elements plan, direct and oversee the programs and Field elements implement them (conduct or assign the actual work). Part of HQ program planning and oversight entails establishing projects (discrete activities with definitive beginnings and endings). EERE Headquarters or Field elements (the Golden Field Office, DOE Operations Offices and Regional Offices) then plan the projects and direct and oversee project implementation and other program operations and activities conducted by Federal laboratories and other Government and non-Government entities, including contractors, industry partners, interagency partners, etc.

Project Management Roles



V. Program Management and Project Management Responsibilities

The following table outlines the general responsibilities of EERE Program Managers and Project Managers. Even though Program Managers and Project Managers have the lead responsibilities listed below, they will frequently consult and coordinate with each other during the year.

The core of the Program Management Team typically includes the program manager, technology manager and/or specialist, OPBFA Planning, Budget and Evaluation/ Analysis liaisons, OPES Budget Execution analyst and field Project Manager. Project Management typically includes the Project Manager/ Contracting Officer's Representative (COR), Contracting Officer (CO), and Contracting Specialist (COS).

These responsibilities were derived from and are consistent with current DOE directives governing project management. They have been refined and elaborated by the EERE Program Management Focus Group to more accurately associate with EERE's mission and the nature of its programs.

Planning

EERE Program Management	EERE Project Management
<i>Plans and develops the overall program</i>	<i>Initiates and oversees the project</i>
Provides policy and broad program direction	Provides the Program Manager recommendations on technical performance, cost and schedule requirements for the planned project that contribute to the program's goals and objectives
Aligns programs and projects with Corporate goals and objectives	Defines the project's objectives and how the project will be organized, staffed, and managed
Conducts multi-year program planning and identifies annual performance milestones	Defines the project management approach and optimizes the procurement strategies
Establishes and justifies the need for project within the program	Develops the project execution plan
Supports EERE strategic and mid-term planning efforts	Understands EERE and Program goals, objectives, and strategies
Provides/drafts Program Strategic Plan	Provides input for the Program Strategic Plan

Budget Formulation

EERE Program Management	EERE Project Management
<i>Prepares, justifies, and defends the program budget</i>	<i>Develops and submits the project budget to the Program Manager</i>
Develops and submits estimates of the funding and FTEs needed to carry out the program’s science and technology base and operations and support plans	Prepares the resource requirements of the project
Aggregates and submits the funding and FTE requirements for implementing the program’s authorized projects	Estimates and validates contractor and Federal FTE requirements
Provides the rationale for the program’s activities, including science and technology base, projects, and operations and support	Identifies and validates necessary facilities and equipment
Optimizes program resource allocations to maximize performance results	Justifies the project’s submission to the EERE budget

Program Implementation

EERE Program Management	EERE Project Management
<i>Executes the program budget and implements the program</i>	<i>Implements the project</i>
Authorizes projects and establishes and staffs project management offices	Determines project and contract scope, and recommends new projects, project modifications
Ensures timely funding for projects and other program activities	Executes the project in coordination with the field procurement function
Integrates across all elements of the program (science and technology base, projects, and operations and support)	Selects project performers in coordination with the field procurement function
Monitors program-level milestones and evaluates progress	Evaluates contractor performance and determines acceptability of completed work
Assures proper coordination between multiple Field Elements, other DOE programs, Federal agencies, other program partners.	Monitors project-level milestones and evaluates progress
Advocates the program through liaison with the public and private sectors	Provides technical direction to Field contractors who execute projects
Is accountable for achieving program objectives, e.g. cost, schedule and technical performance	Is accountable for Government project funds and ensures their timely distribution
Maintains power base through networking and partnership development with industry	Assures proper coordination by all appropriate line and staff elements beginning with project inception
	Is accountable for achieving project objectives, e.g., cost, schedule and technical performance

Program Analysis and Evaluation

EERE Program Management	EERE Project Management
<i>Analyzes and evaluates the overall performance of the program</i>	<i>Analyzes and evaluates detailed performance of the project</i>
Evaluates program variances from expected progress and initiates necessary corrective actions	Tracks project execution against cost, schedule and technical performance
Ensures Field performance and status of assigned program tasking, e.g., science and technology base and operations and support	Independently assesses regular project status reports
Reviews project portfolio performance against established baselines	Identifies significant variances in project progress and recommends corrective actions
Supports Corporate and Departmental evaluation efforts	Regularly assesses and reports project status, e.g., cost, schedule, technical performance, to the program manager
Identifies significant variances in program results and recommends corrective actions	
Validates reported results	
Establishes an evaluation plan	
Estimates program benefits to date	
Ensures adequate peer reviews of program progress	

VI. How to Manage an EERE Program: A General Overview of the Program Management Cycle

The Program Management Cycle

The EERE program management teams are responsible for transforming strategic objectives into reality through the successful development and execution of programs/projects.

Additional information about the EERE mission and the supporting Program missions are in Chapter 1 of the Guide.

The successful accomplishment of EERE’s mission is dependent upon the ability of program management teams to transform strategic objectives into reality, building the foundation for EERE’s success.

While program management uses defined methods to develop and monitor programs, effective program management is best described as an art. Vital elements of program management can be identified and detailed in guides (such as this) and training. However, it is the personal combination of motivation, talent, knowledge, and experience that produces effective program managers.

Program management is a complex and multi-dimensional task involving technical competence, communication and negotiation skills, creativity, organization, and especially, effective time management. Using these skills, the EERE program management staff must juggle the many different tasks and responsibilities involved in successful:

- Planning,
- Budget formulation,
- Program implementation, and
- Program analysis and evaluation.

Planning

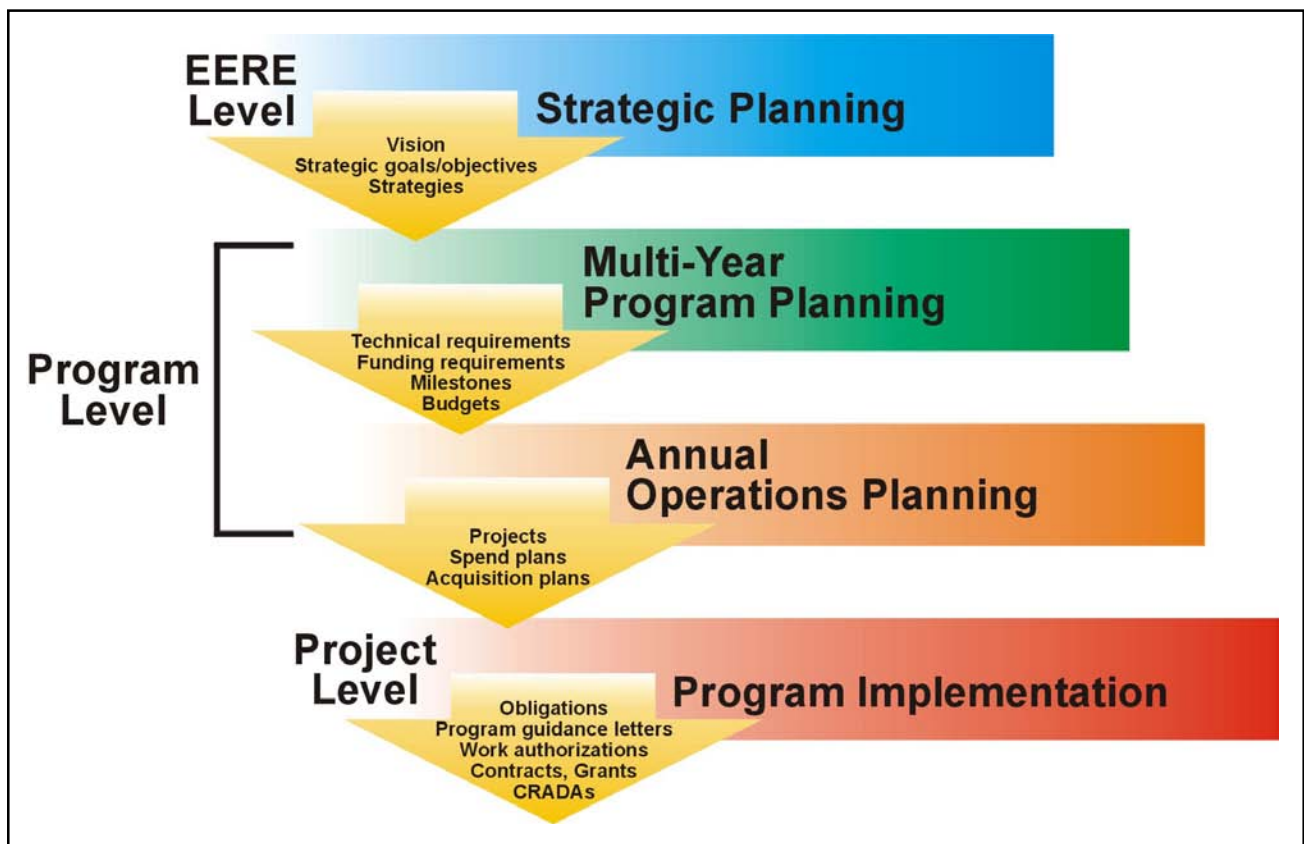
Additional information about the EERE planning structure is in Chapter 4 of the Guide.

EERE corporate and program planning is conducted in three broad areas:

- ***Strategic***
- ***Multi-Year Program***
- ***Annual Operations***

The EERE program management planning cycle involves a progression of activities that are tiered into three broad levels. The program management team contributes at all three levels. Strate-

gic planning at the DOE, EERE, and Program levels addresses the broad DOE-wide missions, visions, strategies, and strategic objectives (identified in the current DOE Strategic Plan) and formulates EERE and Program specific missions, visions, strategies and strategic objectives. Multi-Year Program Planning is performed largely at the program level and translates the strategies and strategic objectives developed at the strategic level into specific technical, funding, and schedule requirements for multi-year program plans. Annual operations planning reduces programs into their constituent projects and details, technical objectives, contracts, grants, and Field assignments, budgets, and milestones for each year. The figure below summarizes the program management cycle planning stages.



Program Management Cycle Planning Stages

In addition to these plans, prudent program management would develop contingency plans at the program level and, more importantly, at the project level to be ready to respond to significant, and unexpected, increases or decreases in budget authority.

Strategic Planning (every 2-3 years)

EERE Strategic Plan, updated in October 2002, is found at http://www.eere.energy.gov/office_eere/pdfs/.

Strategic planning steps:

- 1. EERE Strategic Plan is issued.**
- 2. Program management team assists in the development of the strategic objectives and issues.**
- 3. Program management team helps generate strategies.**
- 4. Program management team conducts broad program planning.**

DOE Guidelines for Strategic Planning are at <http://www.cfo.doe.gov/stratmgmt/SP-guide.htm>.

The strategic planning process is a multi-level process where the overall DOE and EERE mission, vision, and broad strategic goals are successively refined into increasing levels of detail. The process leads to the formulation of EERE strategic goals that provide the focus and justification (including legislative) for EERE programs.

The EERE Strategic Plan is produced at the Assistant Secretary level and is updated approximately every 2-3 years.

Some Programs develop Strategic Plans at the Program Office level and update them periodically as the technology industry and DOE environmental changes and as the EERE Strategic Plan is updated. The purpose of strategic planning is to assure that the long-term goals and objectives for which the program is striving are the best that can be currently envisioned. The program can then be executed in concert with the DOE and EERE missions, goals, and objectives.

The key elements developed or reaffirmed through strategic planning are as follows:

- Mission,
- Values,
- Situation analysis,
- Vision, strategic goals and objectives,
- Strategic issues, and
- Strategies.

Additionally, the strategic plan must support the establishment of DOE and EERE performance goals, measures, and expectations as required by the Government Performance and Results Act (GPRA).

The program management team completes the strategic planning process by generating program strategies that target the achievement of the EERE strategic objectives while addressing the realities imposed by the strategic issues (especially legislative mandates and constraints). Broad program planning is conducted by the program manager with input from the Golden Field Office, the Regional Offices, the National Laboratories, industry groups, professional associations, and panels of experts to identify and develop new program areas or to refocus existing programs (if necessary) to achieve strategic objectives.

Multi-year Planning is discussed in more depth in Appendix A-2 of the Guide.

Multi-year Program Planning (Update annually)

- 1. Program management team identifies key program elements.***
- 2. Program management team develops the Multi-Year Program Plan (MYPP).***
- 3. Program management team identifies projects, levels and content of lab support and procurement and financial assistance.***

In developing the Multi-year Program Plan, the program management team begins by identifying key program elements required to achieve the strategic goals and comply with Congressional directives, specifically:

- Technical and/or marketing requirements, risks, and potential barriers,
- Legislative requirements and limitations,
- Program structure,
- Identification of technical and contract management,
- Identification of desired support providers,
- If a team of support providers is desired, identify the structure and roles of this team,
- Funding requirements, and
- Measures/scheduling requirements.

Program milestones must be identified at junctures along the critical path to the program goals and objectives. They should represent key decision points for determining as early as practicable if the program is on track toward achieving objectives and facilitate timely adjustments to the program’s strategies.

The MYPP integrates these key program elements and becomes the *basis for budget requests and justifications*, as well as the baseline document that provides the framework for periodically evaluating and reporting program progress. The MYPP is also considered a “living document” and is updated on an annual “rolling” basis. An MYPP is developed for each program and contains the following:

- Introduction
- Goals and Objectives
- Technical and/or Marketing Plan
- Implementation Strategy
- Management Plan

The program management team updates the MYPP with input and assistance from many sources, including laboratories and support contractors.

Annual Operations Plan (Each fiscal year)

Detailed process for preparing Annual Operating Plans is in Appendix A-3 of the Guide.

- *Annual Operating Plan (AOP) starts with ensuing fiscal year of MYPP.*
- *Program manager reviews goal, objectives and milestones.*
- *AOP defines means of achieving upcoming FY milestones.*
- *AOP identifies all work for year by all performers.*
- *AOP includes spend plan.*
- *AOP drives acquisition plan.*

After the MYPP is updated, the program manager begins the annual operations planning process by using the ensuing fiscal year (slice) of the MYPP as the foundation on which to develop the Annual Operating Plan. The program management team reviews the program’s goals and objectives. He/she then reviews the near-term milestones and determines the activities required in the upcoming execution year to achieve them. Some of the milestones will be achieved by ongoing project activities from prior fiscal years. Others will require the initiation of new projects. All will require the identification of the applicable funding requirements and the timing of the funding obligations. In each case, the work performer and/or procurement and/or financial assistance

SMS Planning Stages are defined in Chapter 4.2 of the Guide.

vehicles will be identified and the cost, schedule and technical requirements specified.

Where it is anticipated that the laboratories will be assigned the work, the program manager may direct them to generate and submit a Field Work Proposal (FWP). In many cases the FWP will be submitted as part of the laboratory's Annual Operating Plan. In reviewing the FWP, the program manager may discuss and negotiate its provisions with the lab before deciding upon the level of tasking and funding necessary.

Where the performer is other than a lab, the program manager needs to determine the appropriate procurement or financial assistance instrument and estimate the funding required.

To complete the AOP, the program management team develops a Spend Plan, which identifies all of the funding required and when it will be needed during the year. The completed AOP is then used to develop an Acquisition Plan (see Appendix C), which provides the planning details including the lead times for preparing procurement and financial assistance documents. The AOP is also the source of information for generating Work Authorizations and Program Guidance Letters to the field.

Budget Formulation

General Budget Formulation Guidance is in Chapter 5 of the Guide. The DOE Budget Process is further explained in Appendix B-1 of the Guide.

Reference: DOE Budget Formulation Manual DOE 0130.1

SMS Budget Formulation is defined in Chapter 5.2 of the Guide.

- *The program management team refers to internal planning.*
- *The program management team gathers input from Labs and Field offices.*
- *DOE Controller issues call for development of the Corporate Review Budget (CRB).*

After the program has been fully defined, the program management team secures funding through the budget development process.

The DOE budget process begins each spring with the preparation of a DOE internal budget called the Corporate Review Budget (CRB). This budget is for the fiscal year that is two years away, e.g., the budget process beginning in the spring of 2001 is for FY 2003.

Prior to developing the first draft of the budget, the program management team gathers input from appropriate personnel at DOE headquarters, the labs and field offices as well as internal planning, primarily the multi-year program plan. The program management team should already have much of this information from the multi-year program planning process which occurs prior to the Budget Formulation Process.

The DOE Corporate Review Budget Document is described in detail in Guide Appendix B-2.

Development of DOE Corporate Review Budget

The program management team reviews their program and prepares the program budget including the key activity summaries, based on what the program needs to accomplish to achieve its goals and contribute to higher level (EERE, DOE National) goals. Useful information for budgeting purposes can come from the DOE spend plan history, the existing budget, and the multi-year program plan. These budgets are then reviewed by the Program Office and the Offices of Planning, Budget Formulation and Analysis.

The Program budget is then reviewed by the Deputy Assistant Secretaries who may accept the budget, or recommended changes or cuts. Discussions between the Deputy Assistant Secretaries and the Assistant Secretary determine initial funding levels at which the budget will be developed. Based on the budget agreed upon by the Assistant Secretary and the Deputy Assistant Secretaries, the Program Office is usually requested to update the Key Activity Summaries.

The Key Activity Summary

Preparation of The Key Activity Summary is discussed in Guide Appendix B-2 beginning on page B-8.

The Key Activity Summary is a major part of the overall budget document that is the basis of the budget request. The Key Activity Summary includes program descriptions/explanations, overall objectives and long-term strategic goals, and lists all projects conducted under each program. The program manager develops the upcoming budget year’s key activities using the CRB for guidance, or any draft key activities developed for the CRB, the previous fiscal year’s Key Activity Summary, and planning documents. With each review of the budget, the Key Activity Summary should be updated to reflect any changes in the budget.

Program Implementation

- ***Program management team initiates the development of required program support funding documents.***
- ***Program management team updates the Multi-Year Program Plan, Spend Plan, and the Annual Operating Plan.***
- ***Program management team finalizes and submits program support funding documents.***
- ***Program management team tracks the obligation of funds and updates the Spend Plan accordingly.***

Program Implementation is further described in Chapter 6 of the Guide.

SMS Program Implementation Stages are defined in Chapter 6.2 of the Guide.

Program Execution Processes are described in detail in the Guide at Appendix C “EERE Acquisition Guidance”. A detailed Table of Contents in Appendix C is helpful in identifying and locating specific information.

Since program implementation and procurement activities are vital to maintaining program progress, and many procurements and interagency agreements can have significant lead times, program support funding documents (e.g., procurement requests, work authorizations, etc.) should be submitted at the earliest possible time. To accomplish the timely submittal of the program support funding documents, the program management team should implement the acquisition plan and initiate the generation of these documents early (especially documents for interagency agreements, sole source justifications, and statements of work).

After fiscal year funding levels (from Congress) have been established, the program manager updates the MYPP, AOP (projects, milestones, spend plan), and acquisition plan to reflect funding realities.

The program execution phase is initiated with the finalization and submittal of the program support funding documents to the Office of Program Execution Support (OPES) to begin the authorization, obligation, and procurement process. As funds are authorized, OPES updates the Spend Plan accordingly, and the program management team tracks the obligation of funds and updates the Spend Plan as funds become obligated. The current Spend Plan is reflected in the Spend Plan spreadsheet in the EERE Data Center.

To avoid program interruptions, another major program manager responsibility is to ensure that funding is provided to the program supporters (labs, contractors, etc.) in a timely fashion according to the Spend Plan. This is accomplished through the submission of the appropriate program support funding documents to the Program Execution Specialist as part of the monthly Approved Funding Program (AFP) process.

Program Analysis and Evaluation

- ***Program management team oversees and tracks program performance.***
- ***Program management team presents program progress at Program Progress Reviews.***
- ***Program management team must allow for unforeseen events.***
- ***Program management team feeds program progress back to strategic planning participants to update strategic objectives and refocus program if necessary.***

As the program and individual projects progress, the program management team is responsible for oversight and tracking of the program’s technical, schedule, and fiscal progress. They continually evaluate progress through discussions and reviews with program managers, and when required, initiate corrective action to keep programs on target toward achieving the desired strategic goals.

Program Analysis and Evaluation is further described in Chapter 7 of the Guide.

Program progress will be reported to management through monthly EERE Program Progress Reviews. These reviews provide the forum for the dissemination of program progress to EERE management along with required status reports from the field.

SMS Analysis and Evaluation Stages are in Chapter 7.2 of the Guide.

One thing the program management team can always count on is that unforeseen events will occur that significantly alter the dynamics of programs. The skillful program management team will identify the disruption early and develop (often with consultation with peers) a plan to redirect the program. These events/ disruptions may be small enough to require only minimal restructuring of a project milestone or may be large enough to require re-examination of the attainability of the strategic goal itself.

Guide Appendix D-1 provides a suggested Program Progress Review Process.

The key to maintaining the program on a steady course in turbulent conditions is to continuously evaluate progress and feed this information back into the strategic and operational planning processes to realign the program course accordingly.

The very nature of the strategic planning process ensures that EERE programs are not conducted in a vacuum and are coordinated to achieve strategic objectives. Therefore, the progress (or lack of progress) in a program will impact other programs. For this reason, feedback from programs to the strategic planning process is vital to maintain the coordination and focus of efforts.

At key intervals the program office should conduct comprehensive reviews supported by analysis and objective review and recommendations by panels of experts (merit review/peer review). The frequency, regularity, depth and degree of independence of these reviews depends on the nature of the program, degree of technology change or evolution, the program’s performance and results and interest among the stakeholders. The results of these reviews help complete the program management cycle by feeding forward into the next planning stage.

VII. The EERE Strategic Management System (SMS)

SMS is a tool for the programs and the organization.

The SMS is EERE’s executive and program management operating system. It defines each of the four program management phases in terms of a scheduled series of products and their linkage to other products and phases (their interdependencies). This helps to properly align the program and business management activities and provides critical information at the right time for key decision-making. By adopting a clearly defined, integrated, and systematic approach for its management activities, EERE will be able to improve the effectiveness, efficiency, and quality of its programs.

SMS integrates the Program Management Elements:

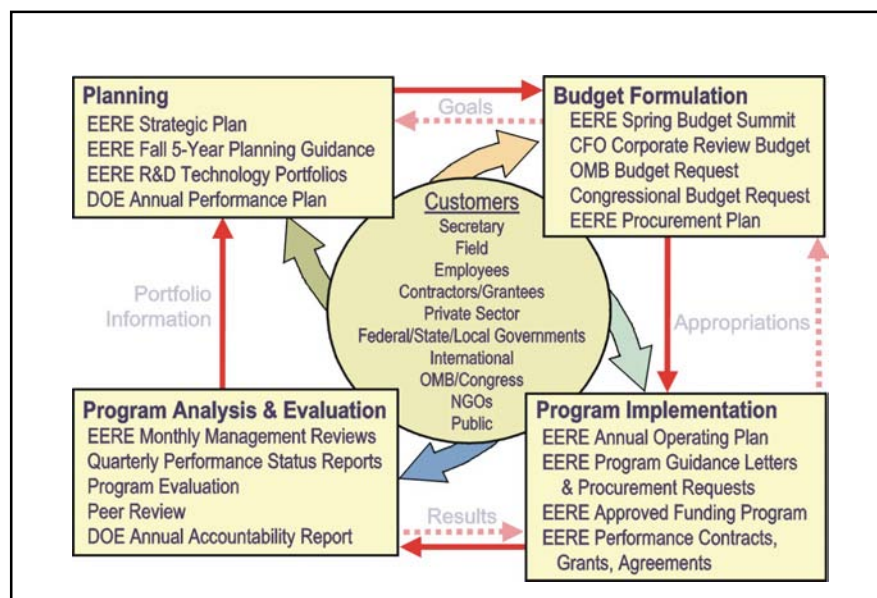
- Planning
- Budget Formulation
- Program Implementation
- Analysis and Evaluation

across all programs and organizational units.

Information on Program Planning, Budget Formulation, Program Implementation and Program Analysis and Evaluation are linked through SMS.

The figure below shows the four phases and the general closed-loop flow for one EERE program cycle.

SMS Links EERE Processes, Products, and Customers



EERE Strategic Management System

As repeated throughout this guide, the program management team needs to plan, budget, execute and evaluate to be successful. It is also necessary that these activities are linked into a cohesive and coherent whole. That is the purpose of the SMS. All of the SMS procedures, processes and tools have been designed to address the interdependence of the parts as well as the parts themselves. If SMS is properly used, each of EERE’s goals and objectives and each EERE program’s multi-year program plans and annual operating plans will feed into the budget. The plans and budgets will then direct the implementing activities. The analysis and evaluation will focus on the desired outcomes as well as feed into the next planning cycle.

The SMS is part of your program management team’s basic tool kit. It’s the roadmap and calendar for planning and implementing the program.

SMS core activities, schedules, and the responsible organizational elements/individuals are shown on the next page. This information is also shown on the chart on page 23, which depicts these activities by SMS Phase: Planning, Budget Formulation, Program Implementation, Analysis and Evaluation. This chart also shows the execution year for which they apply and shows (in blue) the associated activities at the program level.

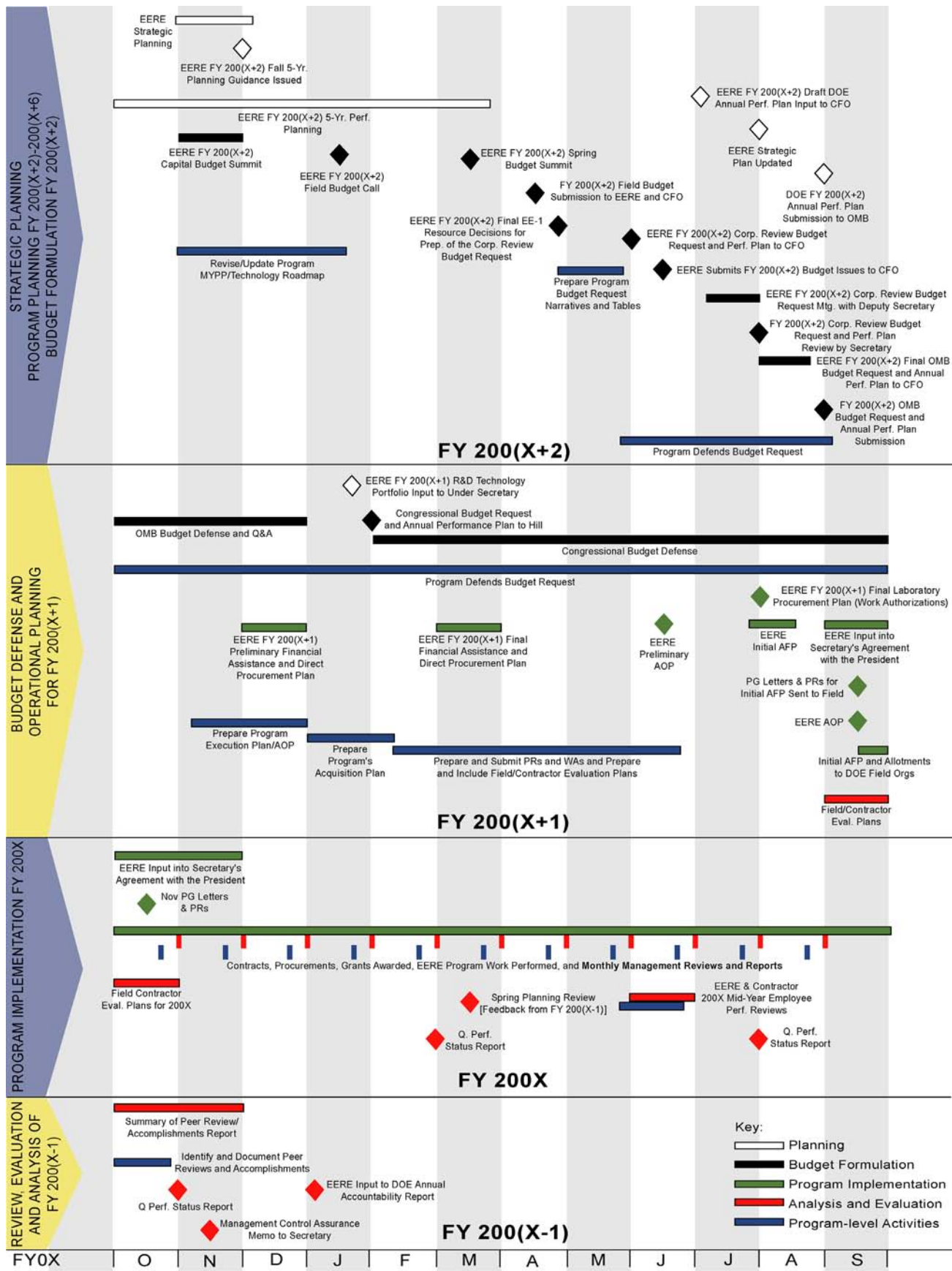
SMS CORE ACTIVITIES, SCHEDULE, AND LEAD ROLES THROUGH OCT 2004

Core Activities and Products	Approx. Target Date	Lead Role*	Support
EERE FY 200X Field Organization and Contractor Evaluation Plan	Sep-Oct (X-1)	EERE, FO	
EERE Program Guidance Letters and Procurement Requests for the Initial FY 200X AFP	Sent to the Field	Sep 7, (X-1)	OPES
EERE FY 200X Initial AFP and Allotments to DOE Field Organizations	Sep & Oct 1, (X-1)	CFO	OPES
EERE FY 200X Program Guidance Letters and/or Procurement Requests for Monthly AFPs	Oct 1, (X-1)-Sep 30, X	POs	OPES
EERE FY 200X Contracts, Procurements, and Grants Awarded	Oct 1, (X-1)-Sep 30, X	EERE, FO	
EERE FY 200X Program Work Performed	Oct 1, (X-1)-Sep 30, X	EERE, FO, Contractors	
EERE FY 200X Monthly Field Organization and Contractor Performance Measure Reporting	Oct 1, (X-1)-Sep 30, X	FO, Contractors	
EERE FY 200(X+2) Multi-Year Performance Planning	Oct (X-1)-May X	POs, FO	
EERE FY 200X Monthly Management Reviews	Nov 1, (X-1)-Sep 30, X	EERE	
EERE FY 200(X+2) Capital Budget Summit	Nov (X-1)	BA, POs, GFO	
EERE Strategic Plan	Nov Every 3rd year	EE-1, BA	POs, BD
EERE FY 200(X+2) Fall Multi-year Planning Guidance Issued	Nov 30, (X-1)	EE-1, BA	
EERE FY 200(X+1) Preliminary Financial Assistance and Direct Procurement Plan	Dec (X-1)	POs, BA	
EERE FY 200(X+2) Field Budget call	Jan 14, X	EERE, CFO	
EERE FY 200(X+1) R&D Technology Portfolio Input to the Under Secretary	Jan 18, X	POs, FO	
EERE FY 200X Quarterly Performance Status Reports.	Feb, Jul, Oct X	POs, BA	
EERE FY 200(X+1) Final Financial Assistance and Direct Procurement Plan	Mar X	EE-1, POs	
EERE FY 200(X+2) Spring Budget Summit	Mar X	EERE, FO	
FY 200X Mid-Year Federal and Non-Federal Employee Performance Reviews	Apr or Jul X	EERE, FO, Contractors	
EERE FY 200(X+2) Field Budget Submission to EERE and the CFO	Apr 12, X	FO	
EERE FY 200(X+2) Final EE-1 Resource Decisions for Preparation of the Corporate Review Budget Request	Apr 26, X	EE-1	
EERE FY 200(X+2) Annual performance plan Input to CFO	Jun 3, X	POs, BA	
EERE FY 200(X+2) Corporate Review Budget Request and Performance Plan to CFO	Jun 3, X	EERE	
EERE FY 200(X+1) Preliminary Annual Operating Plan	Jun 12, X	POs	OPES
EERE Submits FY 200X Budget Issues to the CFO	Jun 14, X	EERE, FO	
EERE FY 200(X+2) Corporate Review Budget Request Meeting with the Deputy Secretary	Jul 8-26, X	S-2, EE-1, CFO, ME	
FY 200(X+2) Corporate Review Budget Request and Performance Plan Review by Secretary	Jul 31, X	S-1, S-2, S-3, CFO, ME	
EERE FY 200(X+1) Final Laboratory Procurement Plan (Work Authorizations)	Aug 1, X	EE-1, National Labs	
EERE FY 200(X+2) Final OMB Budget Request and Annual performance plan to CFO	Aug 2-23, X	BA	POs
EERE FY 200(X+1) Initial Approved Funding Program	Aug 12, X	POs	OPES
FY 200(X+2) OMB Budget Request and Annual performance plan Submission	Sep 3, X	BA, CFO	POs
EERE FY 200(X+1) Input to the Secretary's Agreement with the President	Sep 3-Nov 1, X	POs	OPES
EERE FY 200(X+1) Final Annual Operating Plan	Sep 16, X	POs	OPES
EERE Program Guidance Letters and Procurement Requests for the Initial FY 200(X+1) AFP	Sep 16, X	POs	OPES Sent to the Field
EERE FY 200(X+1) Initial AFP and Allotments to DOE Field Organizations	Sep 16 & Oct 1, X	CFO	
FY 200X Federal and Non-Federal Employee Performance Reviews	Oct X or Jan (X+1)	EERE, FO, Contractors	
FY 200(X+2) OMB Budget Defense Q&A	Oct-Dec X	BA, FO	
EERE FY 200(X+1) Contracts, Procurements, and Grants Awarded	Oct 1, X-Sep 30, (X+1)	EERE, FO	
EERE FY 200(X+1) Program Work Performed	Oct 1, X-Sep 30, (X+1)	EERE, FO, Contractors	
EERE FY 200(X+1) Program Guidance Letters and/or Procurement Requests for Monthly AFPs	Oct 1, X-Sep 30, (X+1)	POs	OPES
EERE FY 200X Summary of Peer Reviews; Accomplishments Report	Nov-Dec X	EERE, FO	
EERE FY 200(X-1) Management Control Assurance Memo to the Secretary	Nov 15, (X-1)	EE-1, BA	
EERE FY 200(X-1) Input to the DOE Annual Accountability Report	Jan 1, (X+1)	EE-1, BA, CFO	
FY 200(X+2) Congressional Budget Request and Annual performance plan Submission	Feb 4, (X+1)	CFO	
FY 200(X+2) Congressional Budget Request and Annual performance plan Defense	Feb-Oct, (X+1)	EE-1, BA, FO	

* EERE = Office of Energy Efficiency and Renewable Energy
 EE-1 = Assistant Secretary for EERE
 DAS-TD = EERE Deputy Assistant Secretary for TD
 DAS-BA = EERE Deputy Assistant Secretary for BA
 BA = EERE Office of Business Administration
 CFO = DOE Office of the Chief Financial Officer
 PO = EERE Program Office

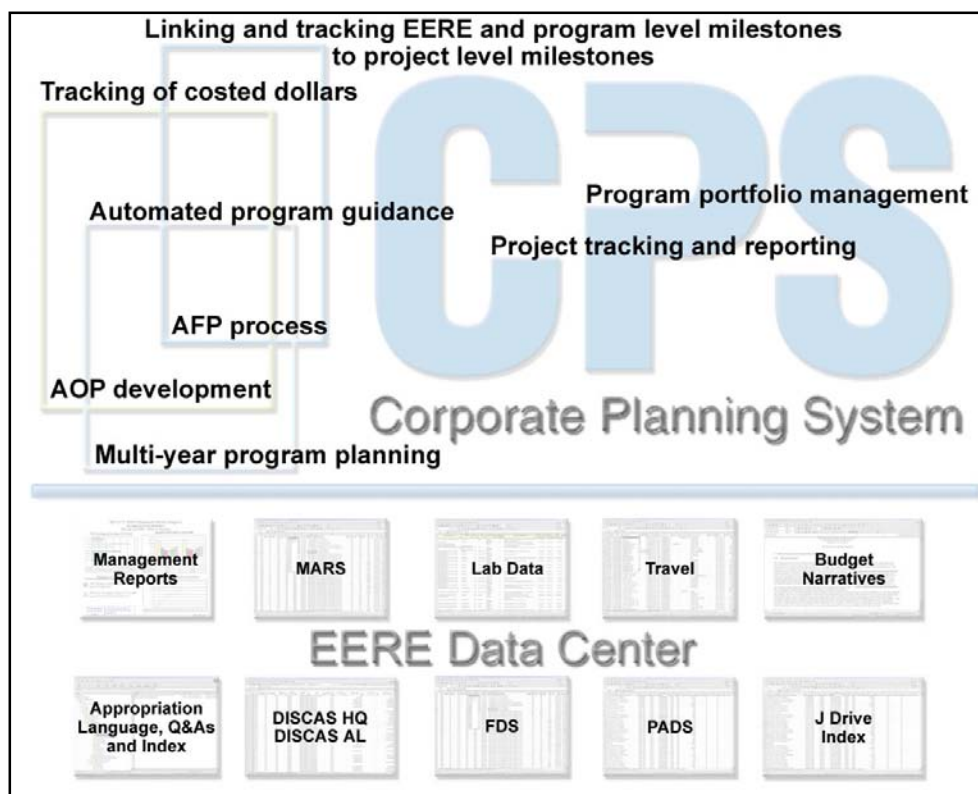
S-1 = DOE Secretary
 S-2 = DOE Deputy Secretary
 S-3 = DOE Under Secretary
 FO = EERE Field organizations
 ME = DOE Office of Management Budget and Evaluation
 BD = EERE Board of Directors

Annual SMS Calendar




VIII. Complementary Systems – EERE Corporate Planning System (CPS) & Data Center

Efficient and effective program management relies on accurate and timely data and information to support each of the major elements of the EERE Strategic Management System: planning, budget formulation, program implementation and analysis and evaluation. This information needs to link and flow through and across SMS program management cycles to ensure consistent and timely preparation of products and effective tracking of implementation. EERE has made substantial investments in two separate information system development initiatives that complement each other and come together to form a virtual comprehensive information system. These two elements are the EERE Corporate Planning System (CPS) and the EERE Data Center. CPS provides major support for planning and budgeting efforts, while the Data Center generally focuses on the collection of budget execution and program and project status data for tracking and control.




EERE Corporate Planning System (CPS) and Data Center

EERE's CPS helps manage, monitor and develop Congressional Budget Requests, spend plans, budgets, project data, and portfolio performance. It supports multi-year program planning, AOP development, and automated program guidance letter creation. CPS allows the user to create and manage portfolios in real time, tie projects and milestones to fiscal year budgets, and track contact information for the organizations and individuals; and allows field personnel to review and modify portfolio information. It also allows real time integration with SBIR and STTR. The system stores a range of necessary data, such as DOE investments, carry-over, and cost-share; GPRA energy benefits; total project development time; and technical progress. Other information such as quarterly and final reports can be uploaded and addressed through the system.



**U.S. Department of Energy
Energy Efficiency and Renewable Energy
Corporate Planning System**



EERE's Corporate Planning System

- **State/Congressional Level Project and Budget Information**
- **Manage and Track GPRA Data**
- **MYPP/AOP Development and Planning**
- **Integration with SBIR/STTR**
- **Automated Program Guidance Creation**
- **Historical Technical and Budget Perspectives**



EERE Corporate Planning System (CPS)

The goal of CPS is to provide a seamless operational and managerial link between all EERE program and project-level activities. EERE has developed basic data definitions and systems to conduct operations and has established proper CPS operational roles and responsibilities among program managers, technology managers, budget analysts, and project managers in the field. These responsibilities are shown in the following table.

In continuing development, CPS, in the future will introduce additional functionality including:

- Linking and tracking EERE and program level milestones to project level milestones
- Tracking of costed dollars
- Inclusion of historical project and budget data
- Implementation of a paperless AFP process
- Implementing advanced reporting features of funding portfolios
- Multi-year program planning, AOP development, automated program guidance, project tracking and reporting, and program portfolio management.

Detailed information on CPS use is contained in the CPS Desk Reference (http://ee-intranet/is/documents/desk_reference.doc)

EERE Data Center

The other essential tool for the program management team is the EERE Data Center, a set of spreadsheets, tables and text in folders on the EERE “J” Drive. These folders are populated with program information and routinely updated to help manage the overlapping program management cycles for several fiscal years simultaneously. These Data Center files serve as building blocks to plan, budget and implement program activities. They also are used to record implementing actions, including tasking (work assignments, contracts, grants and cooperative agreements) and related obligations and expenditures. Finally, they facilitate the tracking of program progress against goals, objectives, milestones and planned and appropriated funding.

The EERE Data Center standardizes and integrates EERE financial, procurement, and acquisition information in a virtual warehouse where DOE-level databases have been selected and downloaded specifically for EERE use. It provides much of the information required for supporting the SMS planning, formulation, execution and evaluation cycle at all levels within EERE including the program level. The structure and general content of the EERE Data Center is shown in the Figure below.

The three primary uses of the Data Center are to:

- Establish a uniform corporate information repository to respond quickly to inquiries,
- Simplify and integrate access to and use of information related to EERE resources, milestones and results, and
- Improve EERE program and project management.

The following are the types of information offered by the EERE Data Center and the applicable uses for the program management team and EERE organizational elements. Information on DOE departmental budget and finance systems is found at <http://www.cfo.doe.gov/crorg/products.cfm> under “Major Systems.”

Financial. The monthly Financial Information System/Management Analysis Reporting System (MARS) download includes funding, obligation, cost, and uncosted data for each EERE contract or financial assistance instrument by office, national laboratory, awardee, CID, program, subprogram, category, and appropriation symbol. This download should be used monthly throughout EERE in the execution part of the cycle as a means to **identify cost trends and to assure that the timing of obligations and costs are consistent with the needs of the particular project.**

Procurement. The monthly Procurement and Assistance Data Systems (PADS) download includes the location, contract value, start date, end date, and a wide-range of other data regarding each EERE procurement. This download should be used monthly throughout EERE in the execution part of the cycle as a means to: 1) ascertain the status of all current procurements; 2) plan procurement actions required to replace expiring procurements; and 3) answer questions regarding the location (state or congressional district) or type (small business set aside) of EERE contracts, cooperative agreements, and grants.

Laboratory Data. The monthly DOE national laboratory downloads include budget and procurement data as provided monthly by the National Renewable Energy Laboratory, Oak Ridge National Laboratory, Argonne National Laboratory and others as their information becomes available for downloading. No departmental system identifies individual national laboratory procurements, so these downloads provide the only routine means for EERE organizations to review and report on the timeliness and status of national laboratory procurements. The timeliness of such procurements often impacts significantly the progress of major projects as well as the funding schedule.

Financial Status Reports. This folder houses the programs’ monthly Financial Status Report as prepared by OPES and discussed by the DAS’s once a month in the ASEE Senior Staff meeting generally held each week. The first page of this two-page PowerPoint report includes three charts and a “Highlights and Cautions” section summarizing the status of obligations, costs, unobligated, and uncosteds for the program as reported by the DOE Financial Data Warehouse and maintained in the “FIS MARS Monthly Reports” folder provided each program.

Budget Narratives. This folder provides a complete copy of the program’s budget requests beginning with the FY 2001 Congressional Budget Request. Each of the files-there are several for each folder for each request-include long file names and sequential numbering to make them easy to find.



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